

## **Pascal Musabyimana**

### **AI Engineer | Computer Vision | Multi-Agent Systems**

Ghent, Belgium

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### **Professional Summary**

AI Engineer and Creative Technology & AI student specializing in multi-agent systems, computer vision, and LLM-assisted workflows. Proven experience delivering functional AI prototypes in corporate environments and building end-to-end AI workflows under real constraints. Strong focus on translating research and experimentation into practical, business-ready systems.

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### **Technical Skills**

#### **Programming Languages**

Python (primary), JavaScript, C#, Swift

#### **AI & Machine Learning**

Computer Vision, YOLOv8, SAM-2, Multimodal AI, Multi-Agent Systems, LLM Integration, Image Segmentation

#### **Frameworks & Libraries**

Streamlit, Gradio, React.js, Next.js, PydanticAI

#### **Cloud & Tools**

Git, GitHub, Google Cloud Platform (GCP), Firebase, MySQL, HuggingFace, Label Studio

#### **Engineering Concepts**

REST APIs, JSON, dotenv, AI system design, data pipelines, rapid prototyping, UX-driven development

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### **Professional Experience**

#### **AI Solutions Engineer (Student / Part-time)**

Sweetspot - Deerlijk | 2025 – Present

- Designed and deployed multi-agent AI systems to automate internal business logic and workflows
- Integrated LLM-based components with structured data pipelines and external APIs
- Led rapid prototyping cycles, delivering functional AI tools under tight deadlines
- Contributed to the operational adoption of AI-driven solutions

### **Computer Vision Software Engineer (Contract)**

EasyPost Belgium – Zwijnaarde | 06/2025

- Engineered a YOLOv8-based computer vision pipeline for real-time anomaly detection
- Designed image processing and inference workflows under production constraints
- Project delivered as a proof-of-concept; further technical details protected under NDA

### **IT Consultant (Student Job)**

Beego | 2021 – 2024

- Provided IT support for individuals in digital poverty
- Diagnosed and resolved hardware, software, and connectivity issues
- Maintained an average customer satisfaction score of 4.5/5

### **Logistics & IT Support**

Cevi | 2021 – 2022

- Prepared and configured laptops and hardware for deployment
- Assisted with IT logistics and infrastructure support

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### **Selected Projects**

#### **Boxing Video Analysis System**

Computer vision pipeline using YOLOv8 and pose estimation to detect fouls from video footage.

### **Luminus AI Energy Assistant**

Developed a multi-agent AI system providing energy advisory support through structured reasoning workflows.

### **Medical Imaging & Energy AI System**

Designed a multimodal AI pipeline combining segmentation and structured report generation.

### **Brain Tumor Detection Prototype**

Implemented a SAM-2-based medical image segmentation system.

### **Real-Time Tracking System (Ghent)**

Object tracking using Kalman filters and particle filters for motion prediction.

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## **Founder Experience**

### **Founder – Lovia App**

Ghent | 2021 – 2023

- Designed and built a student-focused social application
  - Developed MVP, UX flows, beta testing pipeline, and GDPR compliance
  - Managed product lifecycle from concept to deployment
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## **Education**

Bachelor of Science in Creative Technology & AI  
Howest University of Applied Sciences | 2024 – 2027

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## **Interests**

Calisthenics, AI & Machine Learning, Startups, Computer Vision, Data Science, Technology, Macroeconomics

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## **References**

Available upon request.